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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/594,652	06/15/2000	Shekhar Iyer	020431.0985	9277

7590 01/14/2003

ATTEN: CHRISTOPHER W. KENNERLY ESQ.  
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EXAMINER

SHAFFER, ERIC T

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 01/14/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/594,652

Applicant(s)

IYER ET AL.

Examiner

Eric T. Shaffer

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. The following is an initial Office Action upon examination of the above-identified application on the merits. Claims 1 – 13 are pending in this application.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. **Claims 1 - 6** are rejected under 35 U.S.C. 102(e) as being anticipated by Linden et al. (US 6,266,649).

4. **Claim 1** is a system for offering to a user alternate products similar to a requested product, comprising:

a first user interface to receive a user request for a product, such product, having product attributes; Receiving a user request for a product is anticipated by Linden et al., which discloses “this enables the personal recommendations to be generated rapidly and efficiently (such as in real-time in response to a request by the user)” (column 3, lines 34 - 36).

a search procedure to select a set of candidate alternate products having attributes similar to the requested product attributes; A search engine that searches for similar products is anticipated by Linden et al., which discloses “using the current and/or recent shopping cart contents as inputs tends to produce recommendations that are highly correlated to the current short-term interests of the user--even if these short term interest differ significantly from the user's general preferences” (column 3, lines 47 - 52).

Art Unit: 3623

a sort procedure to rank the candidate alternate products in order of decreasing similarity to the requested product; Sorting or ranking products based on similarity attribute scores is anticipated by Linden et al., which discloses “combining the sets of similar products identified into a ranked set in which rankings are based at least in-part on the similarity scores” (column 20, lines 7 - 10).

a second user interface to present the candidate products to the user. A display of products retrieved as the result of a search is anticipated by Linden et al., which discloses “The general form of such a Web page is shown in FIG. 6, which lists five recommended items” (column 15, lines 53 - 54).

5. **Claim 2** is an interface wherein the first and second user interfaces are combined to function as a single interface. The first user interface is anticipated by Linden et al which discloses in FIG. 6, wherein “the user can also select a specific category such as “non-fiction” or “romance” from a drop-down menu 202 to request category-specific recommendations” (column 15, lines 63 – 64) and by the “Refine your recommendations” functionality in FIG. 6. The second user interface is also anticipated by Linden et al., which discloses “The general form of such a Web page is shown in FIG. 6, which lists five recommended items” (column 15, lines 53 - 54).

6. **Claim 3** is a system further comprising:

a database connected to the search procedure, the database containing information identifying available products, the availability of such products, and the attributes of such

Art Unit: 3623

products. Database storage of product information or attributes, such as title, recommendation status and cover type, is anticipated by Linden et al., which discloses “The Web server accesses a database of HTML (Hypertext Markup Language) content which includes product information pages and other browsable information about the various products of the catalog. The items that are the subject of the Recommendation Service are the titles (regardless of media format such as hardcover or paperback) that are represented within this database” (column 7, lines 13 - 18). Availability of the product is anticipated by Linden et al., which discloses “The system as in claim 16, wherein the items are products that are available for online purchase” (column 19, lines 55 - 56).

7. **Claim 4** is the system of Claim 3, wherein the second user interface, when the user selects an alternate product, causes information regarding the availability of the selected alternate product to be updated. An interface that allows a user to choose an alternative product and display information is anticipated by Linden et al., which discloses “From this page, the user can select a link associated with one of the recommended items to view the product information page for that item.” (column 15, lines 54 - 56). Availability of the product is anticipated by Linden et al., which discloses “The system as in claim 16, wherein the items are products that are available for online purchase” (column 19, lines 55 - 56).

8. **Claim 5** is a method for offering, to a user, alternate products similar to a requested product, comprising the steps of:

Art Unit: 3623

receiving from the user a request for a preferred product; A user entered product request is anticipated by Linden et al., which discloses “a recommendation system that generates real-time recommendations in response to requests from users)” (column 2, lines 25 - 26).

selecting a set of alternative products having attributes similar to the preferred product; Receiving product recommendations in response to a user request is anticipated by Linden et al., which discloses “Using the current and/or recent shopping cart contents as inputs tends to produce recommendations that are highly correlated to the current short-term interests of the user” (column 6, lines 42 - 44).

rank ordering the alternative products according to their degree of similarity with the preferred product; Ranking alternative products by degree of similarity is anticipated by Linden et al., which discloses “combining the sets of similar products identified in (a) into a ranked set in which rankings are based at least in-part on the similarity scores, and (c) selecting at least some of the products in the ranked set to display to the online user” (column 20, lines 7 - 12).

presenting to the user the list of alternative products. Displaying a list of alternative or recommended products is anticipated by Linden et al., which discloses “generating recommendations, in which case the recommendations may be generated and displayed automatically when the user views the shopping cart contents” (column 5, lines 31 - 34).

9. **Claim 6** is the method of claim 5, wherein the selecting steps comprises the steps of:

determining a set of attributes of the desired product; Product attributes, such as category and rating, are anticipated by Linden et al., which discloses “the user can also select a specific category such as “non-fiction” or “romance” from a drop-down menu” (column 15, lines 63 -

Art Unit: 3623

64), a user's book rating where "the book titles are rated according to the following scale:

1=Bad! 2=Not for me 3+OK 4+Liked it 5=Loved it" (column 8, lines 7 -12).

calculating values representing measures of similarity for attributes of products other than the preferred product; A value that represents the similarity of the purchasing attribute is called a commonality index and is anticipated by Linden et al., which discloses "Item\_P has been purchased by 300 customers, item\_X by 300 customers, and item\_Y by 30,000 customers. In addition, item\_P and item\_X have 20 customers in common, and item\_P and item\_Y have 25 customers in common. Applying the equation above to the values shown in FIG. 4 produces the following results:

1)  $CI(\text{item\_P}, \text{item\_X}) = 20 / \sqrt{300 \cdot 300} = 0.0667$

2)  $CI(\text{item\_P}, \text{item\_Y}) = 25 / \sqrt{300 \cdot 30,000} = 0.0083$  " (column 13, lines 15 - 23).

calculating product similarities for the other products as a function of the attribute similarities; Calculating product similarity based on similarities in purchase popularity is anticipated by Linden et al., which discloses "the commonality index (CI) values are measures of the similarity between two items, with larger CI values indicating greater degrees of similarity" (column 12, lines 63 - 65).

selecting as the set of alternative products those other products having a product similarity greater than a selected threshold. The threshold of a score above a negative score is anticipated by Linden et al., which discloses "In step 190, the list is filtered by deleting any items that (1) have already been purchased or rated by the user, (2) have a negative score, or (3) do not fall within the designated product group (e.g., books) or category (e.g., "science fiction," or "jazz")" (column 15, lines 36 - 41).

Art Unit: 3623

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ono et al. (US 5,909,023) – System promotes similar products based on past purchases

Breese et al. (US 6,018,738) – Matching similar items based on attributes and entities.

11. None of the claims are allowed and all of the claims stand rejected.

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric Shaffer whose telephone number is (703) 305-5283. The Examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington D.C. 20231

Or faxed to:

(703)746-7238 [After Final communications, labeled "Box AF"]

(703) 746-7239 [Official communications]

(703) 706-9124 [Informal/Draft communications, labeled  
"PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 2, 2121 Crystal Drive, Arlington, VA, 4<sup>th</sup> floor receptionist.

ETS

January 4, 2003

  
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